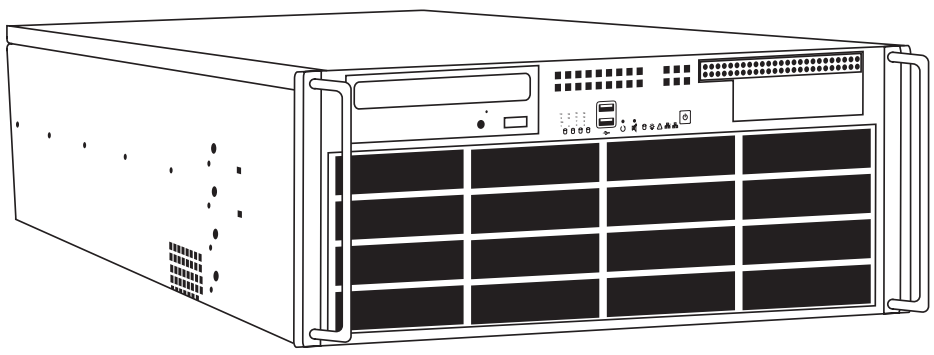
OpenEye®

G4 GRANITERACK iSCSI STORAGE SERVER
Quick Guide

This guide is a quick reference for users to install and operate the G4 GraniteRack and only provides basic information. For further details on installation and operation, please refer to the User Manual.

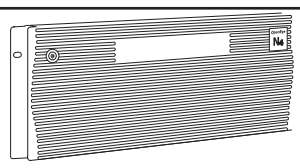
Due to the number and weight of the hard drives, the G4 GraniteRack iSCSI Storage Server is shipped in two boxes.

BOX 1 CONTENTS

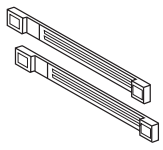


G4 GraniteRack (without drives)

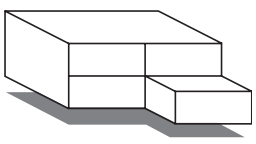
BOX 2 CONTENTS



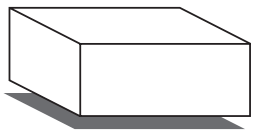
FRONT BEZEL



RACKMOUNT RAIL KIT



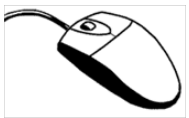
HARD DRIVES (in boxes, 4 per box)



ACCESSORY BOX (see contents below)

ACCESSORY BOX CONTENTS

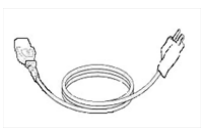
NVR CASE KEY



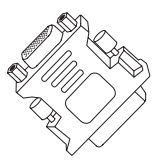
MOUSE

KEYBOARD

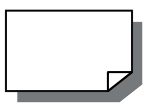
REPAIR DISK / SOFTWARE DISK



POWER CABLE

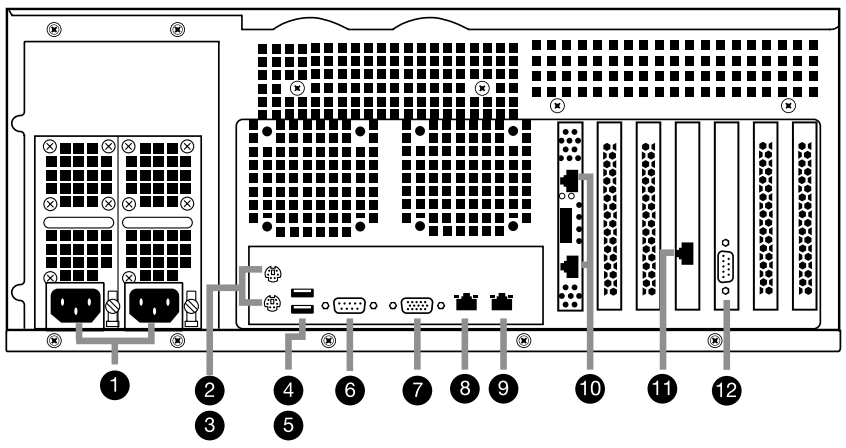


DVI to VGA ADAPTER



QUICK START GUIDE

CONNECTIONS

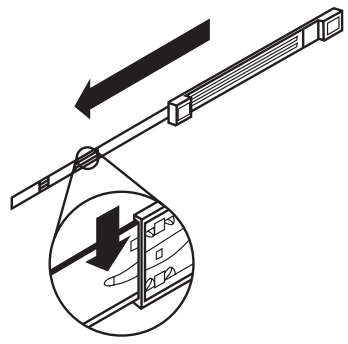


No.	Item	No.	Item	No.	Item
1	Power	5	USB	9	Network
2	PS/2 Mouse	6	RS-232	10	RAID Management
3	PS/2 Keyboard	7	VGA	11	Network
4	USB	8	Network	12	RS-232

RACKMOUNT ASSEMBLY INSTRUCTIONS

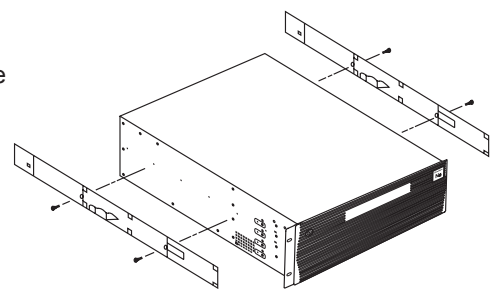
The box your G4 GraniteRack was shipped in should include two rail assemblies, two rail mounting brackets, and the mounting screws you will need to install the system into the rack. There are a variety of rack units available on the market, which may mean the assembly procedure will differ slightly. Refer to the installation instructions for your model of rack unit. Please read this section in its entirety before you begin the installation procedure.

Separating the Sections of Rack Rails



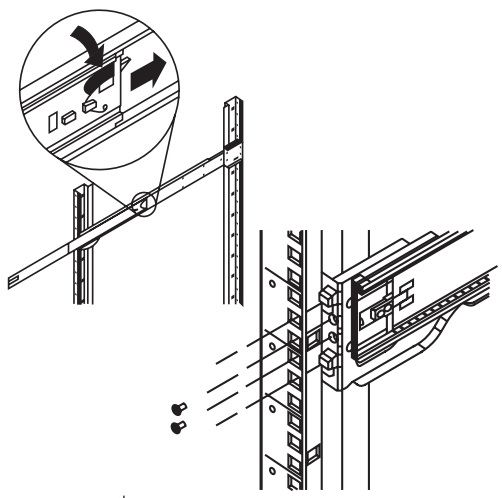
1. Extend the rail assembly by pulling it outward.
2. Press the quick-release tab.
3. Separate the inner rail extension from the outer rail assembly.
4. Repeat theses steps for the second rail assembly.

Installing the Inner Rail Extensions



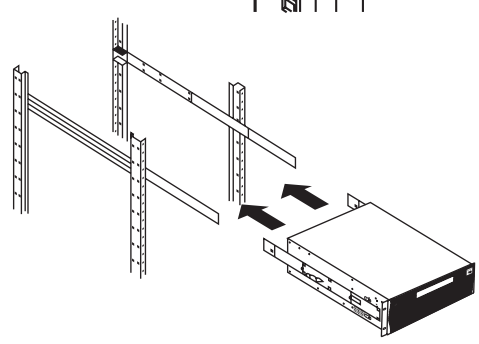
1. Place the inner rail extensions on the side of the chassis, aligning the hooks of the chassis with the rail extension holes. Make sure the extension faces outward, just like the pre-attached inner rail.
2. Slide the extension toward the front of the chassis.
3. Optional: Secure the rail extension to the chassis with 4 screws (included).
4. Repeat these steps for the other side of the chassis.

Installing the Outer Rack Rails



1. Secure the back end of the outer rail to the rack using the leaf springs and screws provided.
2. Press the button where the two outer rails are joined to retract the smaller outer rail.
3. Hang the hooks of the rails onto the rack holes and, if desired, use screws to secure the front of the outer rail onto the rack.
4. Repeat these steps for the other outer rail extension.

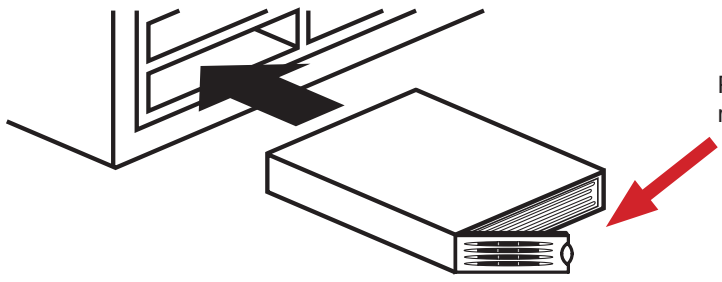
Installing the Recorder into a Rack



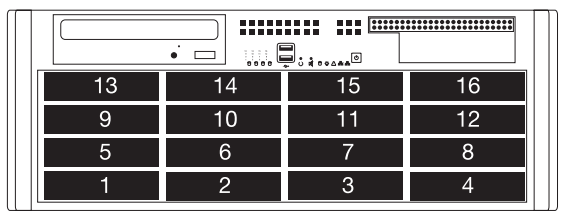
1. Extend the outer rails
2. Align the inner rails with the outer rails on the rack.
3. Slide the inner rails into the outer rails, keeping pressure even on both sides. When pushed all the way into the rack, the rails will click into a locked position (preventing removal without pressing the quick-release tabs).

HARD DRIVE INSTALLATION

Your G4 GraniteRack is shipped with the drives in a separate box. To insert the drives, pull the blue latch release on the front of the drive, insert the drive into the proper port, and close the latch.



Your hard drives should be inserted in order, 1-16, depending on how many hard drives you have purchased. Each hard drive is marked with the number of its port. See the diagram below for the order of hard drive ports.



FOR UNITS WITH RAID CONFIGURATION ONLY:

Use only identical models to replace the hard drives
Do not re-insert failed drives.

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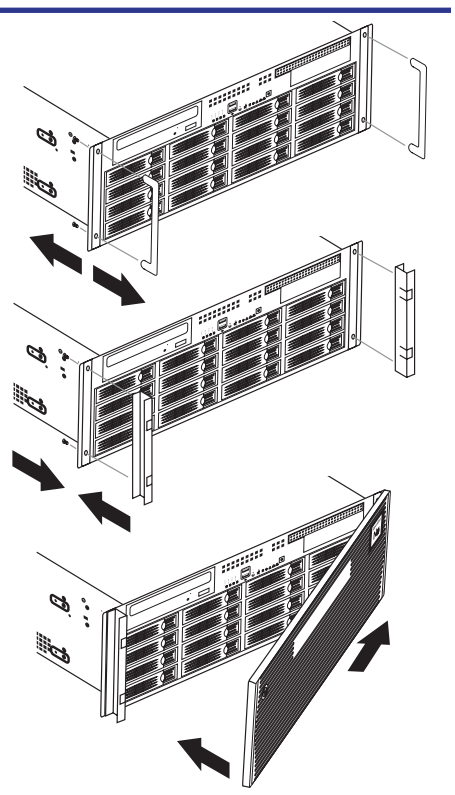
INSTALLING THE FRONT BEZEL

If you choose to mount the front bezel onto your G4 GraniteRack you will need to remove the attached handles and attach the bezel before attaching the rackmount rails.

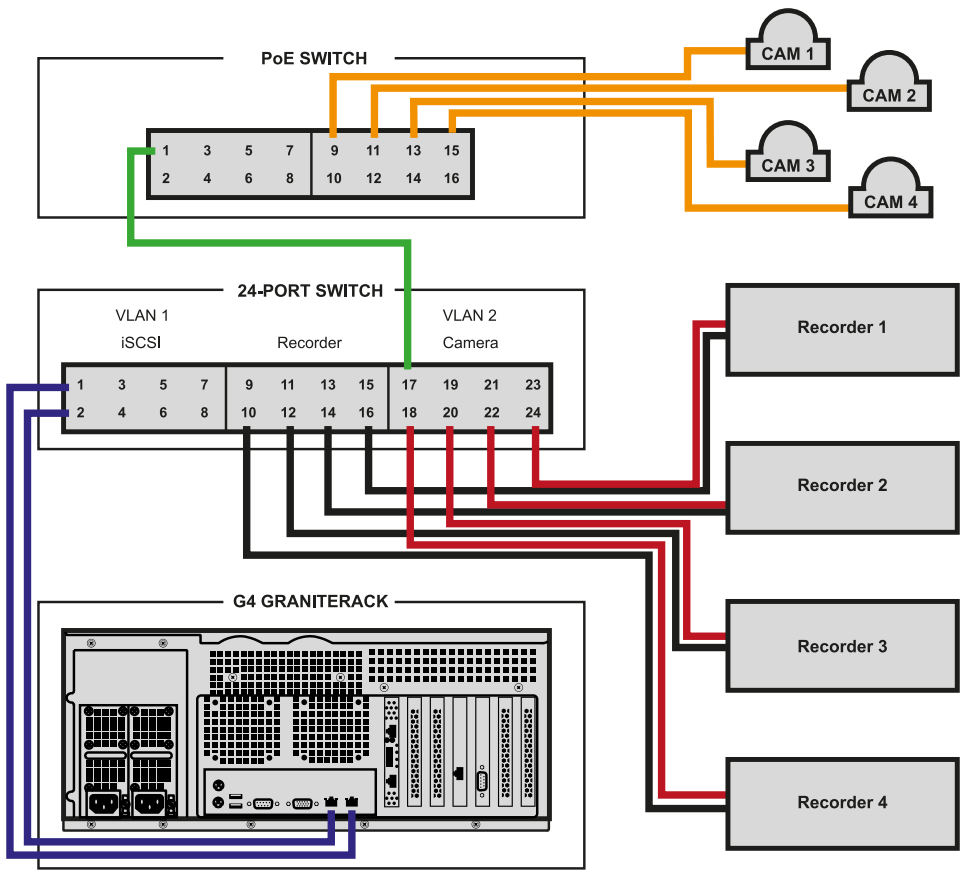
1. Remove the two screws from each handle.
2. Install the included bezel clips and fasten with screws.
3. Align and slide the right side of the bezel into the right clip.
4. Slide the left side of the bezel into the left clip.
5. Lock the bezel by turning the key counter-clockwise.



CONNECTION DIAGRAM

A single G4 GraniteRack can be connected to up to 25 network video recorders to provide up to 64TB of pooled storage.

To connect a G4 GraniteRack to one or more recorders, you can purchase a 24-port switch from OpenEye. This switch comes preconfigured with Gigabit networking and LACP. Ports 1-8 are to be used for iSCSI connection. When connecting a G4 GraniteRack, use 2 connections per unit (1 and 2, 3 and 4, 5 and 6, 7 and 8, respectively). Ports 9-16 are to be used to connect the recorders, and ports 17-24 can be used to connect cameras to the recorders, if necessary.



	IP cameras to PoE switch
	PoE switch to 24-port switch
	G4 GraniteRack to 24-port switch
	Recorder to 24-port switch
	24-port switch to recorder

POWER

To reduce the risk of electrical shock or damage to the equipment:

- Do not disable the power grounding plug. The grounding plug is an important safety feature.
- If the electrical plug you are using does not have a ground plug receptacle, contact a licensed electrician to have it replaced with a grounded electricl outlet.
- Plug the power cord into a grounded electrical outlet that is easily accessible at all times.
- Disconnect the power from the recorder by unplugging the power cord either from the electrical outlet or the recorder.

Operating Temperature Range
32˚F~104˚F (0˚C~40˚C)

LOGGING IN

OpenEye recommends changing the username and password for your G4 GraniteRack. The default Username and Password are as follows

Username: DVRAdmin

Password: dvr4321

CREATING iSCSI TARGET ACCOUNTS

OpenEye recommends creating a separate target volume for each recorder on your system.

1. Click **Start > All Programs > Administrative Tools > Microsoft iSCSI Software Target**.
2. Click **Yes**.
3. Right-click in the **Virtual Disk** field, and then click **Create iSCSI Target.**
4. This will open the **iSCSI Target Wizard**. Click **Next** to continue.
5. Type your **iSCSI Target Name**.

Note The iSCSI Target Name must consist of lowercase letters and numbers only. No spaces, special characters, or underscores may be used. For example: **n1.3**, meaning “NVR1 with 3TB storage.”

6. Type an effective description of the target.
7. Type the **IP Address** of the recorder you are assigning to this volume in the **IQN** field, and then click **Next**.

Note The iSCSI Qualified Name (IQN) allows the iSCSI target to identify the iSCSI initiator requesting access. OpenEye recommends using the IP address of the connecting recorder, but you can also use the MAC address or DNS name.

8. Click **Next**, and then click **Finish**.

CREATING VIRTUAL DISKS

Create a virtual disk for each recorder on your system.

1. In the iSCSI Target window, click **Devices**.
2. Right-click the **Devices List** field, and then click **Create Virtual Disk**.
3. This will open the **Create Virtual Disk Wizard**. Click **Next** to continue.
4. Type the location in the **File** field.

Note The location name should be the same as the iSCSI Target Name. The location should be formatted as E:\{iSCSI Target name].vhd.

5. Set the **Size of the Virtual Disk** (in megabits).
6. Type an effective **Virtual Disk Description**.
7. To assign a recorder client to the volume, click **Add**.
8. Select the target recorder.
9. Click **Next**, and then click **Finish**.

RECORDER CONFIGURATION

Once your G4 GraniteRack is connected and set up, you will need to configure the iSCSI unit and the recorder to communicate with each other.

CONFIGURE THE GRANITERACK TO COMMUNICATE WITH THE RECORDER

1. On the **iSCSI Initiators** tab, click Identifier **Type**, and then select **IP Address**.
2. Type the IP address of your recorder in the **Value** field.
3. Click **OK**.
4. Click **OK** again.

CONFIGURE THE RECORDER TO COMMUNICATE WITH THE GRANITERACK

1. Restart your recorder in Windows mode.
2. Click **Start**, and then type **iSCSI Initiator** in the **Search** field.
3. Click **iSCSI Initiator**.
4. In the **Target** field, type the **IP address** of your G4 GraniteRack.
5. Click **Quick Connect**. Once completed, the status will read “connected.”
6. Click **Done**.
7. Click the **Volumes and Devices** tab.
8. Click **Auto Configure**.
9. Click **OK**.

SET THE VOLUME SIZE

The volumes you have created on your G4 GraniteRack will be seen by your recorder as blank hard disks. In order to save video, you must first format the disks.

1. Click **Disk Management.**
2. In the **Initialize Disk** window, select **GBT**.

Note GBT supports drives that are 3TB or larger, providing a large volume size for maximum storage capacity.

3. Click **OK**.
4. Right-click **Unallocated Volume**, and then click **New Simple Volume**.
5. Click **Next**.
6. Type the **Volume Size** (in MB), up to 3TB (3,000,000 MB).

Note OpenEye recommends a maximum volume size of 3TB.

7. Click **Next**, and then click **Next** again.
8. Click **Allocation Unit Size**, and then select **64K**.
9. Click **Volume Label**, and type **DVR**.
10. Click **Next**.
11. Click **Finish.**

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